The formation and long-term evolution of circumbinary planetary systems across the H-R diagram

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Observations of multiple body systems with ALMA

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The physical properties and dynamics of the youngest multiple protostellar systems and their disks have remained largely unconstrained due to their embedded nature. In this talk, I will discuss recent high-resolution ALMA observations, which are beginning to resolve the gas and dust emission within individual and circumbinary disk structures during the earliest stages of formation. These observations provide a first view into the gas kinematics, gas/dust temperatures, and amount of material in circumstellar and circumbinary disks in young multiple systems. Furthermore, I will highlight efforts to integrate multi-epoch observations from ALMA and the VLA, which have allowed for independent constraints of protostellar masses and orbital parameters in some close separation protostellar binary systems.

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